

**CPC****COOPERATIVE PATENT CLASSIFICATION****G06M****COUNTING MECHANISMS**

**COUNTING OF OBJECTS NOT OTHERWISE PROVIDED FOR** (counting by measuring volume or weight of articles to be counted [G01F](#) , [G01G](#) ; computers [G06C](#) to [G06J](#) ; counting electric pulses [H03K](#) ; counting characters, words or messages in switching networks for transmission of digital information [H04L 12/08](#))

**NOTE**

This subclass covers:

- stepping or continuously-moving mechanical counters operated through one or more inputs applied to the lowest order mechanically or electrically;
- counting systems involving applications of either mechanical, electrical, or electronic counters.

**Guide heading:****G06M 1/00****Design features of general application**

- G06M 1/02 . Housing (for measuring instruments in general [G01D](#) )
- G06M 1/022 .. {Plates }
- G06M 1/024 ... {Bearings }
- G06M 1/026 .. {Connecting or supporting parts }
- G06M 1/028 .. {Arbors, drum fixing and adjusting means (arbor-fixing means [F16C 17/08](#) ) }
  
- G06M 1/04 . for driving the stage of lowest order (with variable ratio of drive [G06M 1/38](#))
- G06M 1/041 .. {for drum-type indicating means }
- G06M 1/042 ... {with click devices (electromagnetic driving means [G06M 1/102](#) ) }
- G06M 1/044 ... {with escapements (electromagnetic driving means [G06M 1/102](#) ) }
- G06M 1/045 .. {for dial, pointer, or similar type indicating means }
- G06M 1/047 .. {for arithmetical operations }
- G06M 1/048 .. {with switching means between two or more counting devices }
- G06M 1/06 .. producing continuous revolution of the stage, e.g. with gear train
- G06M 1/062 ... {for drum type indicating means }
- G06M 1/064 ... {for dial, pointer, or similar type indicating means }
- G06M 1/066 ... {for arithmetical operations }
- G06M 1/068 ... {with switching means between two or more counting devices }
  
- G06M 1/08 . for actuating the drive
- G06M 1/083 .. {by mechanical means (counting of stacked objects [G06M 9/00](#) ) }
- G06M 1/086 ... {including barriers (counting of conveyed objects [G06M 7/00](#) ) }

- G06M 1/10 .. by electric or magnetic means
- G06M 1/101 ... {by electro-optical means }
- G06M 1/102 ... {by magnetic or electromagnetic means }
- G06M 1/104 .... {electromagnets, clicks }
- G06M 1/105 ..... {electronic circuits for actuating the electromagnets }
- G06M 1/107 .... {electromotors }
- G06M 1/108 ... {by electronic means }
- G06M 1/12 .. by fluid means
- G06M 1/123 ... {by pneumatic means }
- G06M 1/126 ... {by hydraulic means }
  
- G06M 1/14 . for transferring a condition from one stage to a higher stage (with variable ratio of transfer [G06M 1/38](#))
- G06M 1/143 .. {with drums }
- G06M 1/146 .. {with dials, pointers, or similar type indicating means }
- G06M 1/16 .. self-operating, e.g. by Geneva mechanism
- G06M 1/163 ... {with drums }
- G06M 1/166 ... {with dials, pointers or similar type indicating means }
- G06M 1/18 .. requiring external operation, e.g. by electromagnetic force
- G06M 1/183 ... {with drums }
- G06M 1/186 ... {with dials, pointers, or similar type indicating means }
- G06M 1/20 .. specially adapted for denominations with unequal numbers in each stage, e.g. degrees and minutes of angle
  
- G06M 1/22 . for visual indication of the result of count on counting mechanisms, e.g. by window with magnifying lens
- G06M 1/24 .. Drums  
Dials  
Pointers (for measuring instruments in general [G01D](#) ; {for time measuring instruments [G04B 19/00](#), including drums [G04B 19/20C](#), [G04C 19/04](#); date indicating [G04B 19/24](#) })
- G06M 1/241 ... { Drums }
- G06M 1/243 .... { Drums with presetting means }
- G06M 1/245 ... { Dials; Pointers }
- G06M 1/246 ... { Bands; Sheets }
- G06M 1/248 ... { Discs }
- G06M 1/26 .. Aligning means
  
- G06M 1/27 . for representing the result of count in the form of electric signals, e.g. by sensing markings on the counter drum
- G06M 1/272 .. using photoelectric means
- G06M 1/274 .. using magnetic means  
using Hall-effect devices
- G06M 1/276 .. using mechanically-actuated contacts
  
- G06M 1/28 . for zeroising or setting to a particular value

- G06M 1/283 .. {with drums }
- G06M 1/286 .. {with dials, pointers, or similar type indicating means }
- G06M 1/30 .. using heart-shaped or similar cams  
using levers
- G06M 1/303 ... {with drums }
- G06M 1/306 ... {with dials, pointers, or similar type indicating means }
- G06M 1/32 ... Actuating means, e.g. magnet, spring, weight
- G06M 1/323 .... {with drums }
- G06M 1/326 .... {with dials, pointers, or similar type indicating means }
- G06M 1/34 .. using reset shafts
- G06M 1/343 ... {with drums }
- G06M 1/346 ... {with dials, pointers, or similar type indicating means }
- G06M 1/36 ... Actuating means, e.g. magnet, spring, weight
- G06M 1/363 .... {with drums }
- G06M 1/366 .... {with dials, pointers, or similar type indicating means }
  
- G06M 1/38 . for varying ratio of drive or transfer mechanism, e.g. by using alternative counting trains
- G06M 1/385 .. {differentials }
  
- G06M 3/00** **Counters with additional facilities** (generating electric pulses at random intervals [H03K 3/84](#))
  
- G06M 3/02 . for performing an operation at a predetermined value of the count, e.g. arresting a machine { ([G06M 3/04](#) takes precedence) }
- G06M 3/021 .. {with drums type indicating means }
- G06M 3/022 ... {by subtracting }
- G06M 3/024 ... {by adding }
- G06M 3/025 .. {with dial, pointer, or similar type indicating means }
- G06M 3/027 ... {by subtracting }
- G06M 3/028 ... {by adding }
- G06M 3/04 .. with an additional counter train operating in the reverse direction
- G06M 3/043 ... {with drums }
- G06M 3/046 ... {with dials, pointers, or similar type indicating means }
  
- G06M 3/06 . for printing or separately displaying result of count (display systems [G09](#) )
- G06M 3/062 .. {for printing }
- G06M 3/065 ... {with drums }
- G06M 3/067 ... {with dials, pointers, or similar type indicating means }
  
- G06M 3/08 . for counting the input from several sources  
for counting inputs of different amounts
  
- G06M 3/10 . for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor [G06M 1/20](#))

G06M 3/12 . for preventing incorrect actuation, e.g. for preventing falsification

G06M 3/14 . for registering difference of positive and negative actuations

**Guide heading:** **Counting of objects** (in machines for shaping metal without removing material [B21C 51/00](#); in printing machines or presses [B41F 33/02](#); in office copying machines [B41L 39/02](#); of axles of rail vehicles [B61L 1/16](#); in packaging machines [B65B 65/08](#); of objects conveyed through a pipe or tube [B65G 51/36](#); entry or exit registers [G07C 9/00](#))

#### **G06M 7/00 Counting of objects carried by a conveyer**

G06M 7/02 . wherein objects ahead of the sensing element are separated to produce a distinct gap between successive objects

G06M 7/04 . . Counting of piece goods, e.g. of boxes

G06M 7/06 . . Counting of flat articles, e.g. of sheets of paper

G06M 7/08 . wherein the direction of movement of the objects is changed at the station where they are sensed

G06M 7/10 . . Counting of flat overlapped articles, e.g. of cards

#### **G06M 9/00 Counting of objects in a stack thereof**

G06M 9/02 . by using a rotating separator incorporating pneumatic suction nozzles

G06M 9/025 . . {the rotation axis being substantially parallel to the stacking direction }

#### **G06M 11/00 Counting of objects distributed at random, e.g. on a surface**

G06M 11/02 . using an electron beam scanning a surface line by line, e.g. of blood cells on a substrate

G06M 11/04 . . with provision for distinguishing between different sizes of objects ([investigating particle size in general G01N 15/00](#))

**Guide heading:**

#### **G06M 2207/00 Indexing scheme relating to counting of objects carried by a conveyer**

G06M 2207/02 . Counting of generally flat and overlapped articles, e.g. cards, newspapers